

REMARKS

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 12-14 under 35 USC 103(a) as being unpatentable over Endo (U.S. Patent No. 5,698,901) in view of Schmidt et al. (U.S. Patent No. 5,750,210). Claim 15 is rejected under 35 USC 103(a) as being unpatentable over Endo ('901) in view of Schmidt et al. ('210) as applied to claims 12-14 above, and further in view of Yokoyama et al. (U.S. Patent No. 5,069,967). Claims 22 and 23 are rejected under 35 USC 103(a) as being unpatentable over Endo ('901) in view of Pang et al. (U.S. Patent No. 5,017,403) and Schmidt et al. ('210). The Applicant respectfully traverses and submits that the claims are not rendered obvious by the cited references, either individually or in combination. In particular, all claim elements of the independent claims 12 and 22 are not taught by the cited references. Independent claim 12 claims: *A process comprising: forming a low-k material upon a substrate; and forming an a-C:B:F material over said low-k material; patterning said a-C:B:F material to form a hard mask; and patterning said low-k material with said hard mask.* And, independent claim 22 claims: *A process comprising: forming a metal layer upon a substrate; patterning said metal layer; forming an a-C:B:F barrier layer onto said metal layer; and, forming a low-k material onto said a-C:B:F barrier layer.* None of the cited references teach these claim elements. In contrast, Endo merely teaches an amorphous carbon and fluorine film used as an interlayer dielectric (ILD), and not as a barrier layer above an ILD or as a hard mask. Schmidt teaches an amorphous carbon, fluorine, and boron film that is used as a protective layer over a magnetic recording medium. Similarly, Yokohama teaches a carbon, fluorine, and boron film that is used as the topcoat on a magnetic layer of a magnetic recording medium. Pang teaches a dielectric film of an unknown material conformally coated over metal structures and a silicon containing carbon layer as an ILD formed

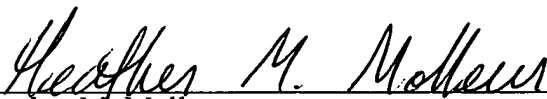
over the conformal dielectric film. Therefore, the Applicant respectfully submits that the independent claims 12 and 22, and the claims 13-15 and 23 depend upon and incorporate the elements of claims 12 and 22, respectively, are not anticipated or rendered obvious by the cited references, either individually or in combination.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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